**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

MDSP TECHNOLOGIES LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	No. 6:23-cv-00257-ADA
	§	
GOOGLE LLC,	§	JURY TRIAL DEMANDED
	§	
Defendant.	§	
	§	
	§	

**DEFENDANT GOOGLE LLC'S RULE 12(b)(6) MOTION TO DISMISS PLAINTIFF'S
COMPLAINT FOR PATENT INFRINGEMENT**

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I.   INTRODUCTION

Defendant Google LLC ("Google") requests that the Court dismiss Plaintiff MDSP Technologies LLC's ("MDSP") Complaint under Rule 12(b)(6) for failure to plead infringement of critical claim limitations. MDSP asserts two patents sharing a common specification, U.S. Patent Nos. 9,239,376 ("the '376 Patent") and 10,371,806 ("the '806 Patent") (collectively, the "Asserted Patents"), and it attaches claim charts to its Complaint mapping features in the accused Google Pixel 6 Pro smartphones to limitations of one claim of each Asserted Patent. The Complaint and charts, however, are devoid of any allegation—let alone supporting facts, citations, or potential evidence—that three claim limitations are met.

First and most critically, MDSP fails to identify any feature in Pixel 6 Pro phones as allegedly meeting limitations reciting "spectral compression" in each Asserted Patent. These limitations were added to the claims during prosecution to overcome prior art rejections, and MDSP's Complaint must therefore meet a heightened pleading standard, as required by this Court and other districts in light of the Federal Circuit's decision in *Bot M8 LLC v. Sony Corporation of America*, 4 F.4th 1342, 1353 (Fed. Cir. 2021). MDSP's Complaint fails to allege that those limitations are met at all, let alone that they satisfy the heightened standard.

Second, for the '376 Patent, MDSP fails to plead that a claim limitation reciting "Doppler broadening detection" is met. At most, MDSP's claim charts provide only a conclusory allegation that speed can be detected using Doppler broadening but point to nothing in the accused Google Pixel 6 Pro phones as allegedly performing that limitation. Third, for the '806 Patent, MDSP likewise fails to accuse anything as meeting a limitation reciting a component that "corrects inertial drift error of the plurality of inertial sensors based on the speed."

This Court should dismiss MDSP's Complaint in its entirety because it fails to sufficiently plead infringement of any claim of the Asserted Patents.

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II.   FACTUAL BACKGROUND

MDSP alleges that Google's Pixel 6 Pro smartphone infringes Claim 1 of each Asserted Patent. *See* Dkts. 1 at ¶19; 1-3; 1-4. The Asserted Patents are generally directed to determining speed or position of a mobile device in indoor or GPS-obstructed environments. '376 Patent at Abstract, 1:12–21, 3:33–48. Instead of using GPS data, the claimed invention combines measurements from radio frequency ("RF") and inertial sensors to compute speed or position of the device. *See id.* at 1:12–19; *see also* 9:21–10:14.

The Asserted Claims recite three claim limitations that are relevant to this motion: (1) the use of a computation method called "spectral compression"; (2) the use of "Doppler broadening detection"; and (3) a component that "corrects inertial drift error of the plurality of inertial sensors based on the speed." Claim 1 of each Asserted Patent is copied below, with these relevant claim limitations emphasized:

> 1.   A system for determining the speed of a mobile device in a multipath environment, comprising:
>
>> a receiver associated with the mobile device configured to intercept at least one radio frequency emission traveling along a plurality of reflected paths from an emitter to the receiver;
>>
>> a narrowband signal detector configured to employ a ***spectral compression*** technique that includes a non-linear operation to transform the at least one intercepted radio frequency emission into Doppler frequency observables;
>>
>> a signal processor configured to employ ***Doppler broadening detection*** to determine the speed of the mobile device based on the Doppler frequency observables.

'376 Patent at Claim 1 (emphasis added).

> 1. A mobile computing device comprising:
>
>> a receiver that transforms two or fewer intercepted radio frequency emissions external to the mobile computing device into Doppler frequency observables;
>>
>> a plurality of inertial sensors, each sensor having a linear accelerometer that

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produces acceleration observables;

a spectral compression positioning sensor that performs *spectral compression* utilizing a non-linear operation on the Doppler frequency observables to produce a set of Doppler frequency observables in a format for physical state estimation by the physical state estimator; and

a physical state estimator that:

processes the set of Doppler frequency observables and the acceleration observables to determine a member of a physical state of the mobile computing device;

converts Doppler frequency observables to speed; and

corrects inertial drift error of the plurality of inertial sensors based on the speed.

'806 Patent at Claim 1 (emphases added).

"Spectral compression" Limitation. "Spectral compression" is a critical feature of the claimed invention—it is included in all claims of both Asserted Patents, and its importance is emphasized repeatedly through the specification. Indeed, the specification describes "the capability [of] using Spectral Compression Positioning (SCP) signal processing" as an "exemplary advantage of the present invention" in the preferred embodiment so as to "maximiz[e] performance and reliability across a large number of environments." *See, e.g.*, '376 Patent at 10:6–14, 12:19–20; *see also id*. at 9:21–24, 11:66–12:4, 15:18–16:11, Figs. 5/1, 5/2.

The "spectral compression" limitation was added to the claims during prosecution of both Asserted Patents to overcome prior art rejections and ultimately secure the allowance of each Asserted Patent. When prosecuting the '376 Patent, the applicants expressly distinguished prior art reference U.S. Publication No. 2004/0097197A1 ("Juncker") by amending then-pending claim 26 (which later issued as Claim 1 asserted here) to add the "spectral compression" limitation. *See* Ex. A (2015-06-30 Claim Amendments at 8). In remarks, the applicants emphasized that Juncker lacked the added limitation of "a narrowband signal detector configured to employ a *spectral*

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compression technique that includes a non-linear operation to transform the reflected radio frequency emissions into Doppler frequency observables." Ex. A (2015-06-30 Remarks at 19) (emphasis added). Following amendment, the examiner allowed the claims. Ex. B (2015-09-18 Notice of Allowance).

Similarly, when prosecuting the '806 Patent, the applicants overcame three prior art references—U.S. Patent Nos. 6,061,021 ("Zibell"), 5,347,285 ("MacDoran-285"), and WO 02/04977 ("MacDoran-977")—by amending then-pending claim 2 (which later issued as Claim 1 asserted here) to add the "spectral compression" limitation. Ex. C (2018-03-30 Claim Amendments at 2). In remarks, the applicants emphasized that "none of [Zibell, MacDoran-285, or MacDoran-977] … describe, teach or suggest *spectral compression*" and, specifically, that "the prior art does not disclose a *spectral compression* positioning sensor that performs *spectral compression* on the Doppler frequency observables to produce a set of Doppler frequency observables in a format for physical state estimation by the physical state estimator." Ex. C (2018-03-30 Remarks at 10) (emphases added). The examiner then allowed the claims, specifically noting that the cited references and closest prior art did not teach the "spectral compression" limitation. Ex. D at 5 (2018-05-02 Notice of Allowance at 5).

In the claim charts attached to MDSP's Complaint, however, MDSP's allegations for the "spectral compression" limitation of Claim 1 of both Asserted Patents, fully excerpted below, fail to identify anything as allegedly satisfying the "spectral compression" limitations. *See* Dkt. 1-3 at 3–4 (below); *see also* Dkt. 1-4 at 2–3 (citing same sources).

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[1c]	a narrowband signal detector configured to employ a spectral compression technique that includes a non-linear operation to transform the at least one intercepted radio frequency emission into Doppler frequency observables;	The SHANNON 5511 RF transceiver is used for positioning based on multiple frequencies. The system is capable of using Doppler shift data as part of GNSS measurements.
		With the exception of the **Google Tensor Application Processor** - which is now in our lab for depotting, the phone's key components are from Samsung, including: Samsung SHANNON A5123 5G Modem, Samsung SHANNON 5511 RF Transceiver, SHANNON 5800 Envelope Tracker IC, Samsung SHANNON 5311A PMIC, And more!
		Source: https://www.techinsights.com/blog/teardown/google-pixel-6-pro-teardown
		Google's operating systems available on Google's mobile devices provide access to raw GNSS measurements including Doppler shift frequency observables.
		Introduction
		In May 2016 and during the "Google I/O" conference, Google announced that the raw GNSS measurements, i.e., the pseudorange, carrier-phase, Doppler shift and carrier-to-noise density ratio (C/N₀) observations, would be accessible through the Android Nougat (version 7) operating systems. In August 22, 2016, the Android 7 (Nougat) was officially released by Google which can be regarded as a breakthrough for the GNSS community. Since then, many researches have been conducted to develop new algorithms to improve the performance of GNSS positioning using these mass-market devices. Early smartphones only provided single-frequency and mostly GPS-only observations. In 2017, the Samsung S8 and Huawei P10 smartphones were released as the first multi-GNSS devices which are able to track carrier-phase measurements. However, in May 2018, the Xiaomi Mi 8 equipped with the new Broadcom BCM47755 GNSS chipset was released as the world's first dual-frequency GNSS smartphone, i.e., added with L5 for GPS and QZSS and E5a for Galileo (European GNSS Agency, GSA, 2018a). It can be also regarded as a great millstone in smartphone positioning as it provides the users with an opportunity to make ionospheric-free linear combination between observations of two frequencies to eliminate the ionosphere effect.
		Source: https://satellite-navigation.springeropen.com/articles/10.1186/s43020-021-00054-y

In fact, MDSP's narrative description of its infringement theory neither mentions "spectral compression" nor explains how that limitation is allegedly met. Instead, MDSP cites only a third-party URL allegedly showing that Pixel 6 Pro phones use a particular component (Samsung's SHANNON 5511 RF transceiver) and an unrelated third-party article claiming that certain measurements, including Doppler shift, would be accessible through Google's operating systems for smartphones. Dkt. 1-3 at 3–4; Dkt. 1-4 at 2–3. Neither the URL nor the article mention or relate to spectral compression.

"Doppler broadening detection" Limitation. Claim 1 of the '376 Patent additionally recites "Doppler broadening detection," which the specification describes as a technique for calculating speed of a sensor device by examining power distribution of the received signal. '376 Patent at 2:65–23:9, 20:66–21:2, Figs. 5/1 and 5/2. Relevant to this motion, the specification explains that "Doppler broadening" is a different technique from "Doppler shift" because the

former measures power distribution while the latter measures change in frequency. '376 Patent at 20:63–21:7. "Doppler shift" refers to the basic and well-known effect that a received frequency varies from an emitted frequency based on the relative motion between the emitter and the receiver. '376 Patent at 5:11–14; *see also* 21:2–5. Yet, for this limitation, MDSP offers only the conclusory allegations that "[t]he speed of Google devices such as the Google Pixel 6 Pro can be detected using Doppler broadening" and that the accused Pixel 6 Pro can use Doppler shift data. Dkt. 1-3 at 3. MDSP alleges no facts to support its bare, conclusory assertion that the accused devices can use "Doppler broadening." And its similarly unsupported allegation regarding "Doppler shift data" is irrelevant, as "Doppler shift" is not the claimed technique. *See id*.

"Corrects inertial drift error" Limitation. Claim 1 of the'806 Patent recites a component that "corrects inertial drift error," which the specification explains is important to the claimed invention because "inertial sensors have inherent random acceleration drift characteristics such that when doubly integrated to produce position [can] result in ***very significant position errors***." *See* '806 Patent at 6:39–43 (emphasis added); *see also* 17:42–44. MDSP's allegation for this limitation alleges nothing—not even a conclusory statement—to suggest that the limitation is satisfied. *See* Dkt. 1-4 at 4–6.

III.   **LEGAL STANDARDS**

"To survive a motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). A plaintiff must plead patent infringement claims with "some factual allegations that, when taken as true, articulate why it is plausible that the accused product infringes the patent claim." *Bot M8*, 4 F.4th 1342 at 1353. "Courts may take judicial notice of government records, like prosecution history …

even when resolving a Rule 12(b)(6) motion." *See Vervain, LLC v. Micron Tech., Inc.*, No. 6:21-cv-487-ADA, 2022 WL 23469, at *5 n.2 (W.D. Tex. Jan. 3, 2022) (collecting cases).

IV.   ARGUMENT

A.   MDSP Fails To Satisfy The *Bot M8* Pleading Standard Required For The "Spectral Compression" Limitation In Both Asserted Patents

This Court should dismiss MDSP's Complaint because it fails to provide any factual allegations that, even if taken as true, "articulate why it is plausible that the accused product" practices the "spectral compression" limitation included in all claims of both Asserted Patents. Indeed, MDSP alleges nothing, let alone any facts, to suggest that the "spectral compression" limitation is met by the accused Google Pixel 6 Pro product.

In *Bot M8*, the Federal Circuit held that a plausible infringement claim "must do more than merely allege entitlement to relief; it must support the grounds for that entitlement with sufficient factual content." 4 F.4th at 1352. The court further clarified that "the level of detail required in any given case will vary depending upon a number of factors, including the complexity of the technology, the materiality of any given element to practicing the asserted claim(s), and the nature of the allegedly infringing device." *Id*. at 1353. Courts, including those in this District, have interpreted *Bot M8* as requiring a "higher level of pleading" for claim limitations added during prosecution to overcome prior art rejections.

For example, in *Vervain*, this Court "demand[ed] a higher level of pleading" for plaintiff's infringement allegations about claim limitations that "lay at the point of novelty." *See* 2022 WL 23469, at *5. This Court explained that, during prosecution, the applicant amended the pending claims to include certain limitations "to overcome the prior art and reach allowance." *Id*. Accordingly, plaintiff could not plead infringement for those particular limitations by merely citing photos of the accused product and its packaging without explaining more. *Id*. As another example,

in *Lexington Luminance LLC v. Bulbrite Industries, Inc.*, the court found that "merely reciting the language of this limitation and citing to a 20-year-old article, without more, does not suffice" when the limitation was material to the issuance of the claim, as it was "added … during prosecution to obtain allowance" and overcome prior art. No. 2:22-cv-3787, 2023 WL 143911, at *5 (D.N.J. Jan. 10, 2023).

Here, MDSP's Complaint should be dismissed because it does not meet the *Bot M8* pleading standard, much less the heightened pleading standard applicable to claim limitations added during prosecution.   Instead of providing the requisite detailed pleading for those limitations, MDSP pleads no facts at all. It cites only to a URL suggesting that Pixel 6 Pro uses a particular component (SHANNON 5511 RF transceiver) and to an unrelated third-party article claiming that Doppler shift would be accessible on phones running Google's operating system. *See* Dkt 1-3 at 3; Dkt. 1-4 at 2. There is no allegation, let alone pleading of any facts or potential evidence, to show that the identified component allegedly performs spectral compression or that the accessibility of Doppler shift on Google's Pixel 6 Pro allegedly involves spectral compression. Indeed, there is nothing at all in MDSP's Complaint or claim charts that addresses or relates to whether Pixel 6 Pro performs "spectral compression." Dkt. 1-3 at 3–4; Dkt. 1-4 at 2–3.

And MDSP's threadbare and irrelevant allegations for the "spectral compression" limitations additionally fail to meet the heightened pleading standard applicable to claim limitations, like the "spectral compression" limitations, that were material to the issuance of the Asserted Patents. *See supra* Section II. Such allegations are precisely the type that courts have found insufficient to plead a plausible infringement claim. Just as in *Vervain*, where "summarily alleging" a critical limitation without the requisite "level of detail" did not meet the heightened-pleading standard, 2022 WL 23469, at *4–7, here, MDSP's allegations are even more deficient

because they allege no facts whatsoever about "spectral compression." In addition, MDSP's approach of citing an unexplained, third-party article that has nothing to do with "spectral compression" was rejected by the *Lexington* court, which reasoned that merely "reciting the limitation" and citing a third-party article without more does "not suffice given the materiality of [the limitation]." 2023 WL 143911, at *5.

MDSP's Complaint should be dismissed in its entirety because MDSP fails to allege anything as meeting the critical claim limitations reciting "spectral compression" that were added to both Asserted Patents' claims during prosecution to overcome prior art rejections.

B.   MDSP Fails To Plead An Additional Necessary Claim Element In Each Asserted Patent

MDSP's Complaint should also be dismissed in its entirety because MDSP makes only a conclusory allegation about the "Doppler broadening detection" limitation of the '376 Patent claims and fails to allege anything to support that the accused Pixel 6 Pro smartphones perform the function of "correct[ing] inertial drift error" as required by the '806 Patent claims. "[M]ere recitation of claim elements and corresponding conclusions, without supporting factual allegations, is insufficient to satisfy the *Iqbal/Twombly* standard." *Bot M8*, 4 F.4th at 1355. Indeed, this Court has dismissed complaints when, like here, a plaintiff "provide[s] a chart that displays the claim language on one side and the accused product details on the other, accompanied by a brief description," but "fails to identify an essential element in the claim chart." *Ortiz & Assocs. Consulting, LLC v. Ricoh USA, Inc.*, No. 6:21-cv-1178-ADA, 2023 WL 2904583, at *4 (W.D. Tex. Apr. 11, 2023).

For the '376 Patent's "Doppler broadening detection" limitation, MDSP merely states a conclusory allegation that the limitation is met and that the Pixel 6 Pro can use Doppler shift data. *See* Dkt. 1-3 at 3–4. MDSP's conclusory pleading that the speed of "the Google Pixel 6 Pro can

be detected using Doppler broadening," *id.* at 3, amounts to "mere recitation of claim elements and corresponding conclusions, without supporting factual allegations, [which] is insufficient to satisfy the *Iqbal/Twombly* standard." *See Bot M8*, 4 F.4th at 1355. MDSP fails to allege anything material about the accused Pixel 6 Pro as allegedly meeting the claimed "Doppler broadening detection." Dkt. 1-3 at 3–5. And MDSP's allegation that the accused devices can use "Doppler shift" data fails to provide the relevant factual support because, as the'376 Patent specification itself acknowledges, "Doppler shift" is a different technique from "Doppler broadening" because the former measures change in frequency while the later measures power distribution. '376 Patent at 20:63–21:7. Without more explanation from MDSP, Google is not fairly on notice of what MDSP accuses of infringement, and MDSP's claims asserting the '376 Patent should be dismissed.

MDSP's allegations for the "corrects inertial drift error" limitation of the '806 Patent are even more deficient. MDSP does not even make a conclusory allegation, let alone cite any facts to support that Pixel 6 Pro performs the recited "correction" of "inertial drift error." *See* Dkt. 1-4 at 4–6. MDSP's claims asserting the '806 Patent, thus, should be dismissed because the Complaint fails to plausibly allege that the accused Pixel 6 Pro meets every limitation of any claim.

V.   **CONCLUSION**

For the reasons above, MDSP's Complaint should be dismissed entirely.

Dated: June 30, 2023

By: */s/ Amy Liang*
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Paige Arnette Amstutz
pamstutz@scottdoug.com
Texas State Bar No. 00796136
**SCOTT, DOUGLASS &
MCCONNICO, LLP**
303 Colorado Street, Suite 2400
Austin, TX 78701
Telephone: 512-495-6300
Facsimile: 512-495-6399

Darin W. Snyder (*Pro Hac Vice Pending*)
dsnyder@omm.com
Mark Liang (*Pro Hac Vice Pending*)
mliang@omm.com
Amy Liang (*Pro Hac Vice Pending*)
aliang@omm.com
Daniel A. Silverman (*Pro Hac Vice
Pending*)
dsilverman@omm.com
O'MELVENY & MYERS LLP
Two Embarcadero Center, 28th Floor
San Francisco, California 94111-3823
Telephone: 415-984-8700
Facsimile: 415-984-8701

Mark Hayden (*Pro Hac Vice Pending*)
mhayden@omm.com
O'MELVENY & MYERS LLP
Times Square Tower
7 Times Square
New York, NY 10036
Telephone: 212-326-2000
Facsimile: 212-326-2061

Frances Mackay
fmackay@omm.com
O'MELVENY & MYERS LLP
2501 North Harwood Street, Suite 1700
Dallas, TX 75201
Telephone: 972-360-1900
Facsimile: 972-360-1901

Attorneys for Defendant Google LLC

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<u>CERTIFICATE OF SERVICE</u>

Pursuant to the Federal Rules of Civil Procedure and Local Rule CV-5, I hereby certify

that, on June 30, 2023, all counsel of record who have appeared in this case are being served

with a copy of the foregoing via the Court's CM/ECF system.

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/s/ Paige Amstutz
Paige Amstutz

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